RESPONSE UNDER 37 C.F.R. § 1.116 Attorney Docket No.: Q82625

Application No.: 10/502,014

REMARKS

Claims 1 and 9-19 are pending in the application.

Claims 1 and 9-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over

Oharu et al (U. S. Patent No. 6,610,775).

Applicants traverse the rejection.

Independent claims 1 and 11 each require (B) a surfactant which comprises a cationic

surfactant and a nonionic surfactant of the formula (I): R1O[CH2CH(CH3)O]a-(CH2CH2O)bH,

wherein R<sup>1</sup> is a branched alkyl including a main chain having at least 5 carbon atoms and three

or more side chains having a total of at least 3 carbon atoms in all side chains, a is an integer of

at least 3, and b is an integer of 10 to 30.

Oharu et al does not describe a branched alkyl group of Formula (I) of claims 1 and 11

having three or more side chains. Moreover, there is nothing in the cited prior art which suggests

the desirability of modifying the compounds of Oharu et al to have the specifically claimed

structure. Even further, Oharu et al does not recognize the advantageous effects of the present

invention as evidenced in the Declaration under 37 C.F.R. § 1.132 filed September 12, 2008,

which shows that the present invention provides unexpectedly superior results when compared

with the closest prior art embodiment.

In the Action dated November 18, 2008, the Examiner states that the Declaration filed

September 12, 2008 does not disclose the number of side chains in POPPOE-ITDE and therefore

does not establish criticality of the surfactant of Formula (I) where R1 is a branched alkyl having

a main chain having at least 5 carbon atoms and three or more side chains. The Examiner further

states that there are various isomers for the claimed isotridecyl group.

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In response, Applicants submit that the Declaration under 37 C.F.R. § 1.132 filed September 12, 2008 does show the criticality of the number of side chains in the nonionic surfactant and that criticality establishes the nonobviousness of the present invention over Oharu et al.

Specifically, in the Declaration submitted September 12, 2008, Experiment 1 uses polyoxypropylene polyoxyethylene isotridecyl ether (POPPOE-ITDE) having the chemical formula:

 $CH_{3}CH(CH_{3})CH_{2}CH(CH_{3})CH_{2}CH(CH_{3})CH_{2}CH(CH_{3})CH_{2}-O(PO)_{n}(EO)_{m}H.\\$ 

<u>POPPOE-ITDE used in the Declaration has 4 side chains</u> and can impart advantageous effects of the present invention (such as excellent durability of water- and oil-repellency, mechanical stability and chemical stability).

In contrast, Comparative Experiment 2 in the Declaration uses polyoxypropylene polyethylene isopentadecyl ether (IPDE) having the chemical formula:

 $[(C_8H_{17})(C_6H_{13})CH] - O[CH_2CH(CH_3)O]_x - (CH_2CH_2O)_yH.$ 

IPDE has 1 side chain and cannot impart advantageous effects of the present invention.

Specifically, the Declaration shows that polyoxypropylene polyoxyethylene isotridecyl ether gives better mechanical stability and chemical stability than polyoxypropylene polyoxyethylene isopentadecyl ether which is disclosed at column 10, lines 5-6, of Oharu et al. Polyoxypropylene polyoxyethylene isotridecyl ether is included in the scope of the nonionic surfactant of formula (I) recited in present claims 1 and 11, but polyoxypropylene polyoxyethylene isopentadecyl ether (having one side chain) disclosed by Oharu et al is outside of the scope of the nonionic surfactant of formula (I). Thus, the Declaration shows that the

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present invention where R  $^{\rm I}$  is has three or more side chains provides unexpectedly superior

effects which are not obtained when  $R^1$  has fewer side chains.

Accordingly, the present claims are patentable over the cited prior art, and withdrawal of

the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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